

1. A radio module for use by one or more devices in a wireless network, the radio module comprising:

an antenna module that is an integral part of the radio module;

a baseband module that performs demodulation and decoding on signals received over the antenna module and that performs modulation and coding on signals transmitted by the antenna module;

an interface circuit that provides an interface between the baseband module, the antenna module and a host device; and

a physical interface that detachably connects the radio module with the host device.

2. A radio module as defined in claim 1, wherein the antenna module receives power from the host device through the physical interface.

3. A radio module as defined in claim 1, wherein the interface circuit further comprises a host interface module.

4. A radio module as defined in claim 3, wherein the host interface module comprises one of: a USB interface, an Ethernet interface, and a IEEE 1394 interface.

5. A radio module as defined in claim 3, wherein the host interface module provides store and forward capabilities.

6. A radio module as defined in claim 1, wherein the interface circuit further comprises a wireless data link layer module.

7. A radio module as defined in claim 1, wherein the interface circuit further comprises a wireless media access control module.

8. A radio module as defined in claim 1, wherein the physical interface comprises a cable that permits the radio module to be optimally positioned within the wireless network.

9. A radio module as defined in claim 1, further comprising a user interface that indicates to a user when the radio module is optimally positioned within the wireless network.

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10. A radio module for use with each wireless device in a wireless network such that communication occurs between the wireless devices over the wireless network, the radio module comprising:

an antenna module that is an integral part of the radio module;

an interface circuit for logically connecting the antenna module with a host device, wherein the interface circuit includes a baseband module that demodulates and decodes signals received over the antenna module and that modulates and encodes signals transmitted through the antenna module;

a physical interface for detachably connecting the radio module with the host device; and

a cable that supports the logical connection between the interface circuit and the host device through the physical interface, wherein the cable permits the radio module to be flexibly positioned within the wireless network.

11. A radio module as defined in claim 10, wherein power to the radio module is supplied through the physical interface.

12. A radio module as defined in claim 10, wherein the interface circuit comprises one or more of:

a host interface module that forms a logical interface between the host device and the radio module;

a data link control module that performs at least error control for the host device; and

a media access control module that manages a bi-directional bitstream between the host device and the antenna module.

13. A radio module as defined in claim 10, further comprising a user interface that indicates to a user when the radio module is optimally positioned within the wireless network, wherein the flexible cable permits the user to re-position the radio module within the wireless network until the user interface indicates that the radio module is optimally positioned.

14. A radio module as defined in claim 10, wherein the radio module further comprises:

memory; and

a processor.

15. A radio module as defined in claim 14, wherein the processor performs processing required by the interface circuit, wherein processing not performed by the processor occurs on the host device.

16. A radio module that can be flexibly positioned within a wireless network to improve performance of the radio module, the radio module comprising:

- an antenna module including an antenna;
- an interface circuit, wherein the interface circuit includes a baseband module, a data link control module, a media access control module, and a physical layer module;
- a processor and memory, wherein the processor provides processing requirements for the interface circuit on the signals that are received and broadcast over the wireless network;
- a protocol link; and
- a physical interface including a cable that detachably connects with a host device.

17. A radio module as defined in claim 16, wherein the radio module receives power from a host device.

18. A radio module as defined in claim 16, wherein the protocol link is one of IEEE 1394, and USB.

19. A radio module as defined in claim 16, wherein the physical interface is one of a IEEE 1394 connector and a USB connector.

20. A radio module as defined in claim 16, wherein the cable permits the radio module to be flexibly positioned within the wireless network.

21. A radio module as defined in claim 20, wherein the radio module further comprises a user interface that indicates when the radio module is optimally positioned within the wireless network.
22. A radio module as defined in claim 21, wherein the user interface comprises LEDs.

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